ECOLOGY AND ENVIRONMENT, INC.

DALLAS, TEXAS

MEMORANDUM

TO: David Wineman, Region VI RPO

THRU: K. H. Malone, Jr., FITOM

FROM: Thomas Lensing, FIT Biologist TL

DATE: January 20, 1988

SUBJ: Preliminary HRS and Sampling Plan for Fansteel Metals, Muskogee, OK (OKD007221831).
TDD# F06-8710-29

A preliminary HRS for Fansteel Metals in Muskogee, Oklahoma is the subject of this report.

Ground water in the area is limited. The presence of the Alluvial aquifer along the Arkansas River provides water at depths from 50-100 feet. This water is generally hard. Intensively pumped wells may induce inflow of river water. Ground water in this area is used for irrigation purposes, but the exact acreage is unknown. (only irrigation, no drinking water)

Containment for the ground water and surface water routes were evaluated as follows:

> Acid sludge from a wastewater pit was deposited in an unlined landfill. Some surface impoundments contain compatible liners. Those that do not have liners contain lime wastewater. Therefore, the landfill is used for containment because of the contents and the lack of liners.

The amount of hazardous waste deposited at the facility is unknown. The dimensions of the landfill are also unknown, therefore, a default value of 1 is given for hazardous waste quantity.

The exact location of the nearest well drawing from the aquifer of concern is not known. A phone conversation with Nona Aldridge of the Oklahoma Water Resources Board (OWRB), informed FIT that the nearest well is located in T15N, R19E, Section 15. The measurement for the nearest well was taken from the easternmost location of hazardous substance on-site to the western border of Section 15.

The Bald Eagle has a tendency to winter along major rivers. Fansteel Metals is located less than 1/4 mile from the Arkansas River. Mr. John Skeen of the U.S. Fish and Wildlife Service in Oklahoma City verified that the eagle does inhabit certain locations along the Arkansas River. However, exact locations of the nests with respect to the site have not been documented.

Factors to be considered for the completion of the final HRS package:

- Obtain a reasonable estimate of hazardous waste quantity. If the dimensions of the landfill containing acid sludge were available, the volume of the waste could be calculated.

- Determine the exact locations of the irrigation wells in the area, the amount of acres irrigated and the type of crops irrigated. This could provide the total population served by ground water in a 3-mile radius of the site.

- As per the TDD, a sampling plan was to be developed. Reference 7 of the preliminary HRS (attached) reveals adequate sampling on-site and off-site. Surface water sampling of the Arkansas River reveals no significant levels of contamination upstream or downstream from the site. Sampling of off-site irrigation wells could possibly document an observed release to ground water. Air sampling for inorganics should be conducted for an observed release. The best time of year to conduct this sampling would be during the summer when the dry soil and dust particulates could reveal possible contamination in the breathing zone. Due to high radiation levels on-site, monitoring should be conducted.

- Determine bald eagle nest locations in relation to the site.